Department of Veterans Affairs
Veterans Health Administration
Washington, DC 20420

Replaced by VHA Directive 99-046, dated October 12, 1999

VHA DIRECTIVE 98-039

August 27, 1998

INFLUENZA VACCINE - RECOMMENDATION FOR 1998-1999

1. **PURPOSE:** This Veterans Health Administration (VHA) Directive provides guidance on the use of the influenza vaccine for 1998-1999.

2. BACKGROUND

a. For several years the Department of Veterans Affairs (VA) has provided influenza vaccine to high-risk patients and to employees. Information is provided on vaccine composition, usage (including high-risk groups), contraindications, side effects and adverse reactions, dosage, and related preventive strategies (see Att. A). This program will continue to receive increased emphasis as a part of the VA Preventive Medicine Program, and will be assessed based on doses dispensed.

b. Influenza vaccine for 1998-99 contains antigens of three virus strains (two type A and one type B) representing the influenza viruses that are likely to circulate in the United States in the upcoming winter. The trivalent influenza vaccine prepared for the 1998-99 season will include A/Beijing/262/95-like (H1N1), A/Sydney/5/97-like (H3N2), and B/Beijing/184/93-like hemagglutinin antigens. For the B/Beijing/184/93-like antigen, United States manufacturers will use the antigenically equivalent strain B/Harbin/07/94 because of its growth properties.

3. POLICY: It is VHA policy to publish annual recommendations on the use of the influenza vaccine.

4. ACTION

a. VHA Headquarters recommends that the immunization program outlined by the Advisory Committee on Immunization Practices and published in Morbidity and Mortality Weekly Report (MMWR), May 1, 1998, Vol.47, No. RR-6, be followed by VA health care facilities.

b. VA Form 10-5549, Influenza Vaccine Consent Form, (see Att. B), is to be completed by all employees receiving influenza vaccine. These forms should be locally reproduced. The forms may be used for patients as a local option, but written informed consent is not required when the vaccine is administered in the context of a regular doctor-patient relationship.

5. REFERENCES

a. CDC. "Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP)," MMWR, May 1, 1998, Vol. 47, No. RR-6.

b. Physicians' Desk Reference, 52 Edition. Ronald Arky, Medical Consultant. Medical Economics Co., Inc. (pub.) Product Information, Wyeth-Ayerst Laboratories, pg. 3055, 1998.

THIS VHA DIRECTIVE EXPIRES AUGUST 31, 1999

6. FOLLOW-UP RESPONSIBILITY: Chief, Patient Care Services (11), is responsible for the contents of this Directive. Questions relating to the clinical aspects of the influenza immunization program should be referred to the Office of the Program Director for Infectious Diseases, Gary A. Roselle, M.D., at FTS 700-773-6398 or commercial number 513-475-6398.

7. RESCISSION: VHA Directive 97-042 is rescinded. This Directive expires on August 31, 1999.

S/ by Thomas Garthwaite, M.D. for
Kenneth W. Kizer, M.D., M.P.H.
Under Secretary for Health

Attachments

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ATTACHMENT A

INFORMATION ABOUT THE INFLUENZA VIRUS VACCINE FOR 1998-99

1. **Vaccine Use.** The following patient groups are especially targeted for vaccination:

a. **Groups at increased risk for Influenza-Related Complications**

(1) Persons aged 65 years or older.

(2) Residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions.

(3) Adults who have chronic disorders of the pulmonary or cardiovascular systems.

(4) Adults who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications).

(5) Women who will be in the second or third trimester of pregnancy during the influenza season.

b. **Groups that Can Transmit Influenza to Persons at High Risk**

(1) Physicians, nurses, and other personnel in both hospital and outpatient-care settings.

(2) Employees of nursing homes and chronic-care facilities who have contact with patients or residents.

(3) Providers of home care to persons at high risk (e.g., visiting nurses and volunteer workers).

c. **Vaccination of Other Groups**

(1) **Persons Infected with Human Immunodeficiency Virus (HIV).** Limited information exists regarding the frequency and severity of influenza illness among HIV-infected persons, but reports suggest that symptoms might be prolonged and the risk for complications increased for some HIV-infected persons. Influenza vaccine has produced protective antibody titers against influenza in vaccinated HIV-infected persons who have minimal Acquired Immune Deficiency Syndrome (AIDS)-related symptoms and high CD4+ T-lymphocyte cell counts. In patients who have advanced HIV disease and low CD4+ T-lymphocyte cell counts, however, influenza vaccine may not induce protective antibody titers; a second dose of vaccine does not improve the immune response for these persons. Deterioration of CD4+ T-lymphocyte cell counts and progression of clinical HIV disease have not been demonstrated among HIV-infected persons who receive vaccine. Because influenza can result in serious illness and complications and

because influenza vaccination may result in the production of protective antibody titers, vaccination will benefit many HIV-infected patients.

(2) **Persons Traveling to Foreign Countries**

(a) The risk for exposure to influenza during travel to foreign countries varies, depending on season and destination. In the Tropics, influenza can occur throughout the year; in the Southern Hemisphere, most activity occurs from April through September. Because of the short incubation period for influenza, exposure to the virus during travel can result in clinical illness that begins while traveling, which is an inconvenience or potential danger, especially for persons at increased risk for complications. Persons preparing to travel to the Tropics at any time of year or to the Southern Hemisphere from April through September should review their influenza vaccination histories.

(b) If they were not vaccinated the previous fall or winter, they should consider influenza vaccination before travel. Persons in high-risk groups especially should be encouraged to receive the most current vaccine. Persons at high risk who received the previous season's vaccine before travel should be revaccinated in the fall or winter with the current vaccine.

(3) **General Population.** Physicians should administer influenza vaccine to any person who wishes to reduce the likelihood of becoming ill with influenza. Persons who provide essential community services should be considered for vaccination to minimize disruption of essential activities during influenza outbreaks. Other persons in institutional settings (i.e., domiciliaries) should be encouraged to receive vaccine to minimize disruption of routine activities during epidemics.

(4) **Pregnant Women.** Influenza-associated excess mortality among pregnant women has not been documented except during the pandemic of 1918-19 and 1957-58. However, since some data suggest that influenza infection may cause increased morbidity among women during the second and third trimesters of pregnancy, the Advisory Committee on Immunization Practices (ACIP) recommends that women who will be beyond the first trimester of pregnancy ($\geq$14 weeks' gestation)during the influenza season be vaccinated. Pregnant women who have medical conditions that increase their risk for complications from influenza should be vaccinated before the influenza season - regardless of the stage of pregnancy. Because currently available influenza vaccine is not a live-virus vaccine and major systemic reactions to it are rare, many experts consider influenza vaccination safe during any stage of pregnancy. However, because spontaneous abortion is common in the first trimester and unnecessary exposures have traditionally been avoided during this time, some experts prefer influenza vaccination during the second trimester to avoid coincidental association of the vaccine with early pregnancy loss.

2. **Persons Who Should Not Be Vaccinated**

a. Inactivated influenza vaccine should not be administered to persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine without first consulting a physician (see par. 3, Side Effects and Adverse Reactions).

b. Persons with significant acute febrile illness usually should not be vaccinated until their symptoms have abated.

3. **Side Effects and Adverse Reactions**

a. Because influenza vaccine contains only noninfectiousviruses, it cannot cause influenza. Respiratory disease after vaccination represents coincidental illness unrelated to influenza vaccination. The most frequent side effect of vaccination is soreness at the vaccination site that lasts up to 2 days. These local reactions generally are mild and rarely interfere with the ability to conduct usual daily activities. Systemic reactions have been of two types:

(1) Fever, malaise, myalgia, and other systemic symptoms can occur following vaccination and most often affect persons who have had no exposure to the influenza virus antigens in the vaccine (e.g., young children). These reactions begin 6-12 hours after vaccination and can persist for 1 or 2 days.

(2) Immediate, presumably allergic-reactions (e.g., hives, angioedema, allergic asthma, and systemic anaphylaxis) rarely occur after influenza vaccination. These reactions probably result from hypersensitivity to some vaccine component; most reactions likely are caused by residual egg protein. Although current influenza vaccines contain only a small quantity of egg protein, this protein can induce immediate hypersensitivity reactions among persons who have severe egg allergy. Persons who have developed hives, have had swelling of the lips or tongue or have experienced acute respiratory distress or collapse after eating eggs should consult a physician for appropriate evaluation to help determine if vaccine should be administered. Persons with documented immunoglobulin E (IgE) (i.e., mediated hypersensitivity to eggs-including those who have had occupational asthma or other allergic responses due to exposure to egg protein) might also be at increased risk for reactions from influenza vaccine, and similar consultation should be considered.

b. Hypersensitivity reactions to any vaccine component can occur. Although exposure to vaccines containing thimerosal can lead to induction of hypersensitivity, most patients do not develop reactions to thimerosal when administered as a component of vaccines, even when patch or intradermal tests for thimerosal indicate hypersensitivity. When reported, hypersensitivity to thimerosal usually has consisted of local, delayed-type hypersensitivity reactions.

c. Although the 1976 swine influenza vaccine was associated with an increased frequency of Guillain-Barre′ syndrome (GBS), evidence for a casual relationship of GBS with subsequent vaccines prepared from other virus strains is less clear. However, obtaining strong evidence for a possible small increase in risk is difficult for a rare condition such as GBS, which has an annual background incidence of only 10-20 cases per million adults. During three of four influenza seasons studied from 1977 through 1991, the point estimates of the overall relative risk for GBS after influenza vaccination were slightly elevated but were not statistically significant in any of these studies. However, in a recent study of the 1992-93 and 1993-94 seasons, investigators found an elevation in the overall relative risk for GBS of 1.83 (95 percent confidence interval = 1.12-3.00) during the 6 weeks following vaccination, representing an excess of an estimated one to two cases of GBS per million persons vaccinated; the combined

number of GBS cases peaked 2 weeks after vaccination. The increase in the relative risk and the increased number of cases in the second week after vaccination may be the result of vaccination but also could be the result of other factors (e.g., confounding or diagnostic bias) rather than a true vaccine-related risk. Even if GBS were a true side effect in subsequent years, the estimated risk for GBS of one to two cases per million persons vaccinated is substantially less than that for severe influenza, which could be prevented by vaccination in all age groups, especially persons aged ≥65 years and those who have medical indications for influenza vaccination. The potential benefits of influenza vaccination clearly outweigh the possible risks of vaccine-associated GBS. The average case-fatality ratio for GBS is 6 percent and increases with age. However, no evidence indicates that the case-fatality ratio for GBS differs among vaccinated persons and those not vaccinated. Whereas the incidence of GBS in the general population is very low, persons with a history of GBS have a substantially greater likelihood of subsequently developing GBS than persons without such a history. Thus, the likelihood of coincidentally developing GBS after influenza vaccination is expected to be greater among persons with a history of GBS than among persons with no history of this syndrome. Whether influenza vaccination might be causally associated with this risk for recurrence is not known. Avoiding subsequent influenza vaccination of persons known to have developed GBS within 6 weeks of a previous influenza vaccination seems prudent. However, for most persons with a history of GBS who are at high risk for severe complications from influenza, many experts believe the established benefits of influenza vaccination justify yearly vaccination.

d. Hypoprothrombinemia in patients receiving warfarin and elevated theophylline serum concentrations have occurred. Most studies have failed to show any adverse effects of influenza vaccine in patients receiving these drugs. Nevertheless, monitoring for possible enhanced drug effect or toxicity is indicated for those persons taking theophylline preparations or warfarin sodium.

e. Since there is considerable overlap in the target groups for influenza and pneumococcal vaccine, the two can be given at the same time at different sites without increased side effects. However, influenza vaccine is administered each year, whereas pneumococcal vaccine is not.

4. Vaccine Dosage. Adult patients should receive one dose in the deltoid muscle of 0.50 milliliter (ml.) of whole or split virus containing 15 µg each of A/Beijing/262/95-like (H1N1), A/Sydney/5/97-like (H3N2), and B/Beijing/184/93-like hemagglutinin antigens. The months of October through mid-November are optimal for the administration of vaccine since high levels of influenza activity infrequently occur before December in the contiguous United States.

5. Related Preventive Strategies. Antiviral (e.g., rimantadine, amantadine) therapy may be used in unvaccinated individuals who present with an abrupt onset of acute respiratory infection during an influenza A epidemic or might be indicated for persons at high risk who are expected to have an inadequate antibody response to influenza vaccine. This category includes persons who have HIV infection, especially those who have advanced HIV disease. Such patients should be monitored closely if amantadine or rimantadine chemoprophylaxis is administered. Particular care must also be exercised in patients with impaired renal function (especially the elderly) and in patients with seizure disorders. Chemoprophylaxis is not a substitute for immunization because it does not protect against influenza B. Likewise, compliance for the full 6-12 weeks of

an endemic period may be a problem, and it is very costly.

6. VA Medical Center Employees. In recent years many VA medical centers have offered the vaccine to employees because such employees may transmit influenza to patients. Influenza vaccine should be offered in the Employee Health Unit for the purpose of protecting patients in the institution. Immunization records will be maintained in the health unit. Expenses involved in this program should be kept at a minimum, and for this reason, the use of centrally-procured vaccine vials is recommended instead of unit dose vaccine.

ATTACHMENT B

VA FORM 10-5549, INFLUENZA VACCINE CONSENT FORM

1. The Disease. Influenza (flu) is caused by viruses. When people get flu they may have fever, chills, headache, dry cough or muscle aches. Illness may last several days or a week or more, and complete recovery is usual. However, complications may lead to pneumonia or death in some people. For the elderly and people with diabetes or heart, lung, or kidney diseases, flu may be especially serious.

2. The Vaccine. Today's flu vaccines cause fewer side effects than those used in the past. In contrast with some other vaccines, flu vaccine can be taken safely during pregnancy; however, flu vaccine should be given to pregnant women according to the chronic illness criteria applied to other persons. One shot will protect most people from influenza during the next flu season.

3. Possible Vaccine Side Effects. Most people will have no side effects from the vaccine. However, tenderness at the site of the shot may occur and last for several days. Some people will also have fever, chills, headache, or muscle aches within the first 48 hours.

4. Special Precautions. As with any vaccine or drug, the possibility of severe or potentially fatal reactions exists. However, flu vaccine has rarely been associated with severe or fatal reactions. An uncommon illness characterized by ascending paralysis (Guillain-Barre′ Syndrome) has been reported following other flu vaccines but not in association with this flu vaccine; however, it must be assumed that the risk is present. Hypersensitivity reactions to any vaccine component can occur. Exposure to vaccines containing thimerosal can lead to induction of hypersensitivity. When reported, hypersensitivity to thimerosal has usually consisted of local, delayed-type hypersensitivity reactions (localized swelling and redness). In some instances people receiving vaccine have had allergic reactions. The following precautions should be carefully noted:

a. People with known allergy to eggs should receive the vaccine only for specific indications and under special medical supervision.
b. People with fever should delay getting vaccinated until the fever is gone.
c. People who have received another type of vaccine in the past 14 days should consult a physician before taking the flu vaccine.

NOTE: *Please ask if you have any questions about flu or flu vaccine.*

I have read the above statement about influenza (flu), the vaccine, and the special precautions. I have had an opportunity to ask questions, and understand the benefits and risks of flu vaccination. I request that it be given to me, or to the person named below of whom I am the parent or guardian.

_____ _____
Name of Person to Receive Vaccine (Please Print) Date Vaccinated

_____
Manufacturer and Lot No.

_____
(Signature of Person Receiving Vaccine or Parent or Guardian)
Date Signed: _____